

AAGGGAACGTGTTCTCCCTCGTTGGTCATGGAGGCCTGCCCTGCTAGCCGAC  
 10 M E A L P L L A A T  
 ACTCCGGACCACGGCCGCCACCGAAGGCTGCTCTGCTGCCCTACTGCTGTTCTGCTG  
 70 T P D H G R H R R L L L P L L L F L L  
 CCGGCTGGAGCTGTGCAGGGCTGGGAGACAGAGGAGAGGGCCCCGGACTCGCGAAGAGGAG  
 90 P A G A V Q G W E T E E R P R T R E E E  
 TGCCACTTCTACCGGGTGGACAAGTGTACCCGGGAGAGGCATCCGGGTATCGGTCGCC  
 130 C H F Y A G G Q V Y P G E A S R V S V A  
 GACCACCTCCTGCACCTAACGAAAGCGAAGATTCCAAGGCCAGCCCTACTGGGAAGGA  
 150 D H S L H L S K A K I S K P A P Y W E G  
 ACAGCTGTGATCGATGGAGAATTAAAGGAGCTGAAGTTAACTGATTATCGTGGAAATAC  
 190 T A V I D G E F K E L K L T D Y R G K Y  
 TTGGTTTCTTCTTACCCACTTGATTCACATTGTGTGTCCAACGTAAATTATCGCT  
 210 L V F F F Y P L D F T F V C P T E I I A  
 TTTGGCGACAGACTTGAAGAATTCAAGATCTATAAATACTGAAGTGGTAGCATGCTCTGTT  
 250 F G D R L E E F R S I N T E V V A C S V  
 GATTACAGTTACCCATTGGCCTGGATTAATACCCCTCGAAGACAAGGAGGACTTGGG  
 270 D S Q F T H L A W I N T P R R Q G G L G  
 CCAATAAGGATTCCACTTCTTCAGATTGACCCATCAAGATCTCAAAGGACTATGGTGA  
 310 P I R I P L L S D L T H Q I S K D Y G V  
 TACCTAGAGGACTCAGGCCACACTCTTAGAGGTCTCTCATTATTGATGACAAGGAATC  
 350 Y L E D S G H T L R G L F I I D D K G I  
 CTAAGACAAATTACTCTGAATGATCTTCTGTGGTAGATCAAGTGGATGAGACACTACGT  
 370 L R Q I T L N D L P V G R S V D E T L R  
 TTGGTTCAAGCATTCCAGTACACTGACAAACACGGAGAAGTCTGCCCTGCTGGCTGGAAA  
 410 730 750 770  
 CCTGGTAGTGAACAAATAATCCCAGATCCAGCTGGAAAGCTGAAGTATTGATAAAACTG  
 450 790 810 830  
 AATTGAGAAATACCTTCTCAAGTTATGATGCTTGAAAGTTCTCAATAAGTTCACGGTT  
 490 N  
 910  
 CATTACCACAAAAAA

**FIG. 1**

		Consensus #1			Majority	
		10	20	30		
1	M A S G N	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
1	M E A L P	- - L L -	A A T T P D H G R H R R	P L L P L L	NKEF C	
1	M S S G N	- - - - -	- - - - -	- - - - -	- - - - -	NKEF A
1	M A S G N	- - - - -	- - - - -	- - - - -	- - - - -	NKEF B
1	M A A A A G R L L W S S V A R H A S A I S R	- - - - -	- - - - -	- - - - -	- - - - -	MER5
1	M S S G N	- - - - -	- - - - -	- - - - -	- - - - -	MSP23
		Consensus #1			Majority	
		40	50	60		
28	F L L P A G A V Q G W E T T E R P R T R E E E C H F Y A G G	- - - - -	- - - - -	- - - - -	- - - - -	NKEF C
6	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	NKEF A
6	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	NKEF B
23	- S I S A S T V L	- - - - -	R P V A S R R T C	- - - L T D	MER5	
6	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	MSP23
		Consensus #1			Majority	
		70	80	90		
58	Q V Y P G E A S R V S V A D H S L H L S K	A K I S K P A P Y	- - - - -	- - - - -	- - - - -	NKEF C
6	- - - - -	A K I G H P A P N	- - - - -	- - - - -	- - - - -	NKEF A
6	- - - - -	A R I G K P A P D	- - - - -	- - - - -	- - - - -	NKEF B
43	I L W S A S A Q G K S A F S T S S F H T P A V T Q H A P Y	- - - - -	- - - - -	- - - - -	- - - - -	MER5
6	- - - - -	A K I G Y P A P N	- - - - -	- - - - -	- - - - -	MSP23

FIG. 2A

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FIG. 2B

		Consensus #1	Majority		Consensus #1	Majority		Consensus #1	Majority					
· D · · · · ·	D Y G V · · · · ·	G · · · R G L F I I D	NKEF C	· D · · · · ·	D Y G V · · · · ·	G · · · R G L F I I D	NKEF C	· D · · · · ·	D Y G V · · · · ·	G · · · R G L F I I D				
L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D	L S D P T R T I S Q D Y G V L K A D E G I A L R G L F I I D				
190	200	210	197	105	104	162	105	207	135	134				
L S D L T H Q I S K D Y G V Y L E D S G H T L R G L F I I D	V S D P K R T I A Q D Y G V L K A D E G I S F R G L F I I D	V S D P K R T I A Q D Y G V L K T D E G I A Y R G L F I I D	NKEF A	NKEF B	MER5	MSP23	NKEF C	NKEF C	NKEF A	NKEF A				
· D · · · · ·	N D · P · R S V · E · . R L V · A F Q	· D · · · · ·	D K G I I L R Q I T V N D L P V G R S V D E T L R L V Q A F Q	D K G I I L R Q I T V N D P P C C R S V D E T L R L V Q A F Q	D K G I I L R Q I T V N D L P V G R S V D E A L R L V Q A F Q	D K G I I L R Q I T V N D L P V G R S V E E T L R L V K A F Q	D K G I I L R Q I T V N D L P V G R S V D E I I R L V Q A F Q	D K G I I L R Q I T V N D L P V G R S V D E T L R L V Q A F Q	D K G I I L R Q I T V N D L P V G R S V D E T L R L V Q A F Q	D K G I I L R Q I T V N D L P V G R S V D E T L R L V Q A F Q				
220	230	240	135	192	135	237	165	164	222	165				
D K G I I L R Q I T L N D L P V G R S V D E T L R L V Q A F Q	G K G V L R Q I T V N D P P C C R S V D E A L R L V Q A F Q	G K G V L R Q I T V N D L P V G R S V E E T L R L V K A F Q	P N G V V K H L S V N D L P V G R S V D E I I R L V Q A F Q	D K G I I L R Q I T I N D L P V G R S V D E T L R L V Q A F Q	Y T D K H G E V C P A G W K P G S E T I I P D P A G K L K Y	F T D K H G E V C P A G W K P G S D T I K P D V P K T K E Y	Y T D E H G E V C P A G W K P G S D T I K P N V D D S K E Y	F Y E T H G E V C P A N W T P E S P T I K P S P T A S K E Y	F T D K H G E V C P A G W K P G S D T I K P D V N K S K E Y	NKEF C	NKEF A	NKEF B	MER5	MSP23
· D · · · · ·	H G E V C P A · W · P · S · T I · P · . . . . Y	· D · · · · ·	F T D K H G E V C P A G W K P G S D T I K P D V X K S K E Y	F T D K H G E V C P A G W K P G S D T I K P D V N K S K E Y	F T D K H G E V C P A G W K P G S D T I K P D V N K S K E Y	F T D K H G E V C P A G W K P G S D T I K P D V N K S K E Y	F T D K H G E V C P A G W K P G S D T I K P D V N K S K E Y	F T D K H G E V C P A G W K P G S D T I K P D V N K S K E Y	F T D K H G E V C P A G W K P G S D T I K P D V N K S K E Y	NKEF C	NKEF A	NKEF B	MER5	MSP23

FIG. 2C

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Consensus #1  
Majority

NKEF C  
NKEF A  
NKEF B  
MER5  
MSP23

F · K · ·			
F S K - Q K			
267	F D K L N ·		
195	F S K - Q K		
194	F S K - H N		
252	F E K V H Q		
195	F S K - Q K		

FIG.2D

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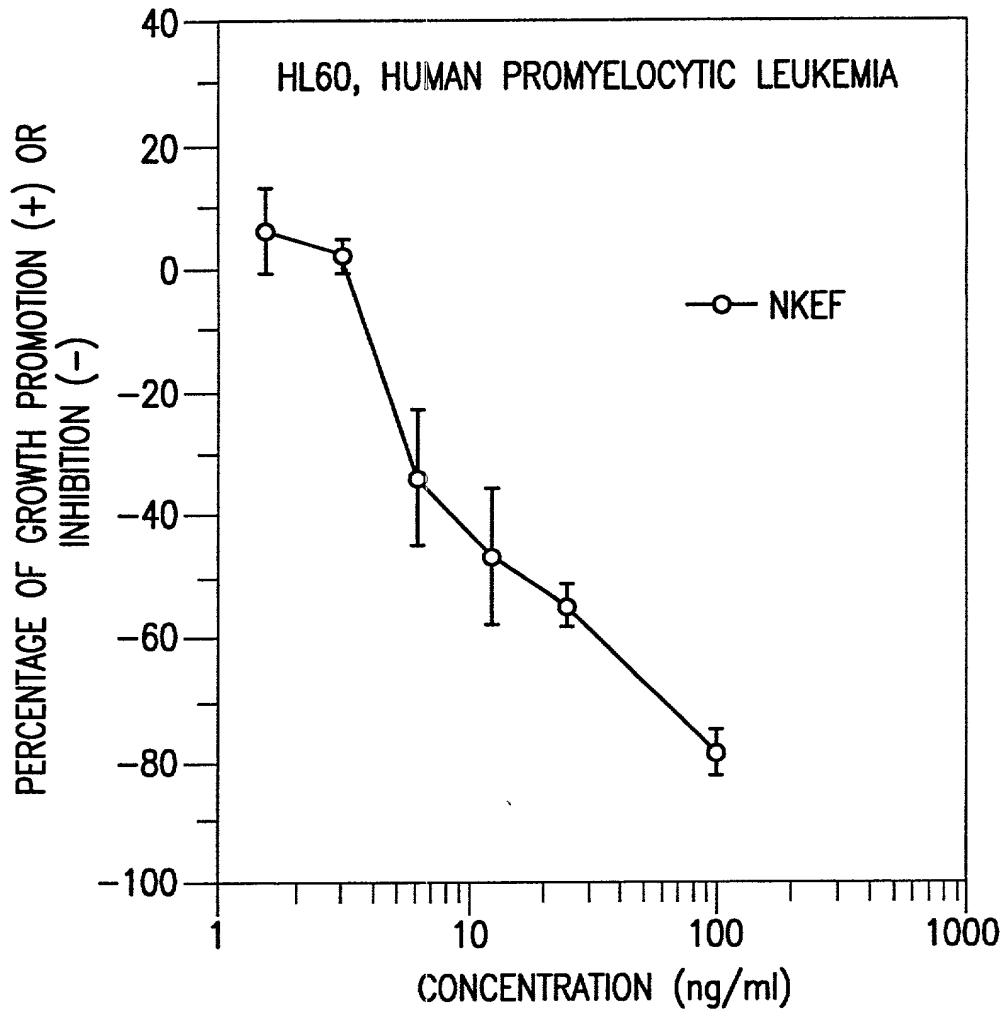


FIG.3

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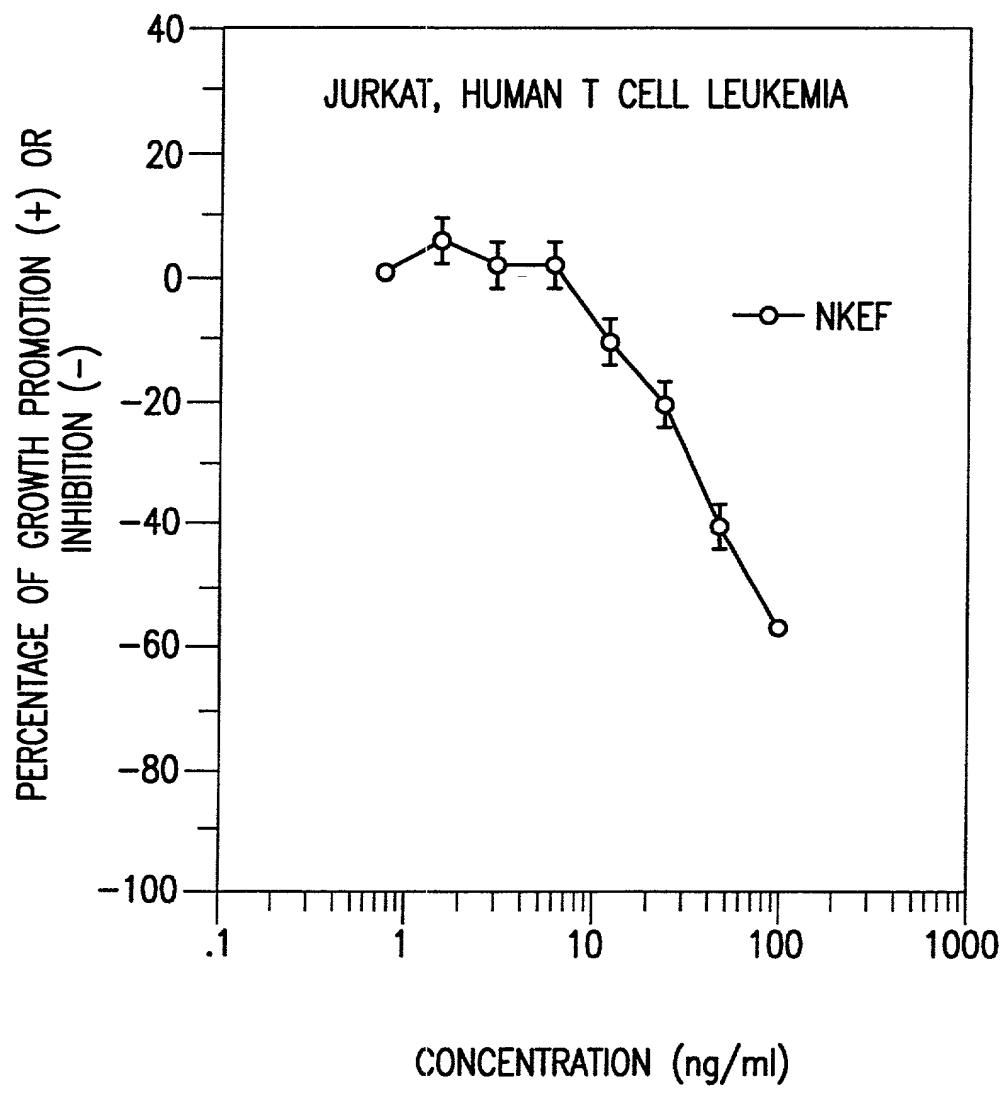


FIG.4

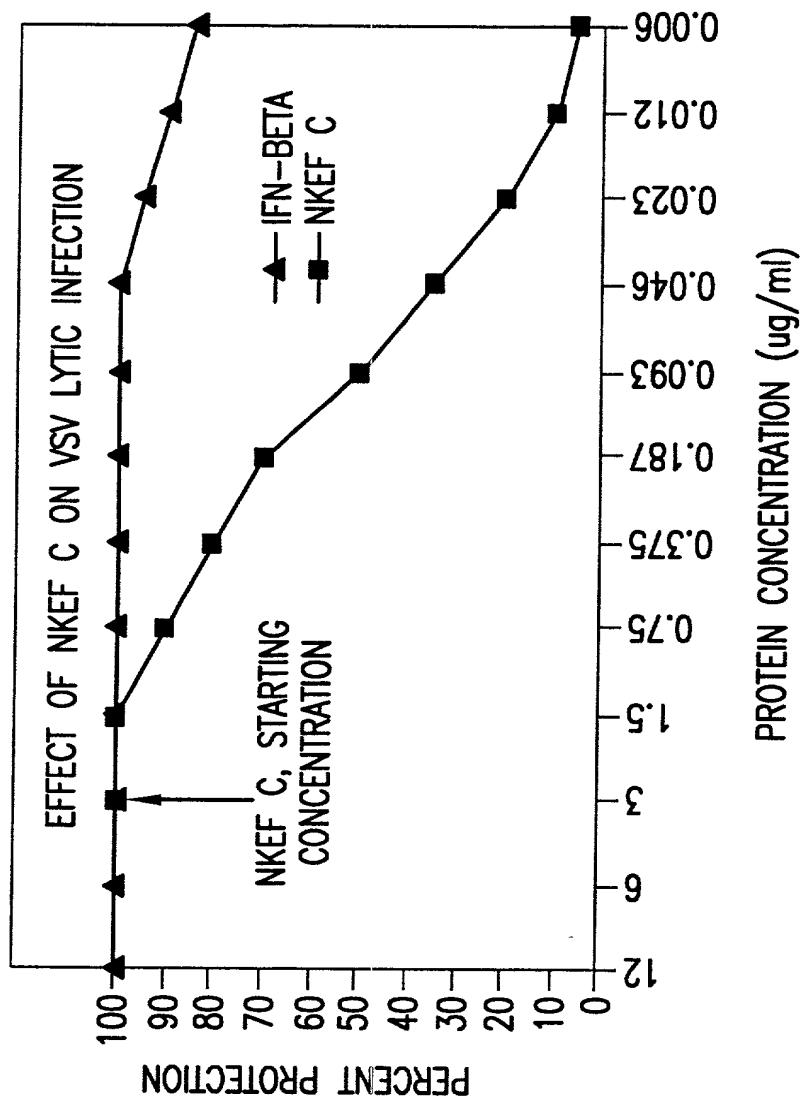


FIG. 5